

## Mexican Pogonocherini

(Coleoptera: Cerambycidae)

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The present report is an attempt to clarify the status of some of previously described Mexican Lamiinae of the tribe Pogonocherini and to make known a number of new species which have special significance in relation to other studies currently in progress. Other presumably undescribed species are before us but are represented by inadequate material for proper interpretation.

Previous writers have disagreed as to the appropriateness of recognizing this group of beetles as a separate tribe and also in the interpretation of the characters expressed in the genera assigned to it. Two of the characters shared by the genera included here are closed intermediate coxal cavities and middle tibiae with an external sinus.

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### KEY TO THE GENERA OF MEXICAN POGONOCHERINI

- |      |   |                    |
|------|---|--------------------|
| 1    | Femora gradually enlarging, not distinctly clavate .....  | 2                  |
| -    | Femora distinctly clavate .....   | 3                  |
| 2(1) | Pronotum without a lateral tubercle; head flat between antennal tubercles; antennae extending beyond elytral apices in both sexes ..... |                    |
|      | ..... <i>Lypsimena</i>  |                    |
| -    | Pronotum with a distinct lateral tubercle; head fully concave between antennal tubercles .....  | <i>Pygmaeopsis</i> |
| 3(1) | Pronotum with or without conical discal tubercles .....   | 4                  |

- Pronotum with discal tubercles in the form of an elongated ridge ..... *Callipogonius*
- 4(3) Antennae with scape slender, fourth segment shorter than third ..... 5
- Antennae with scape stout, fourth segment incurved, longer than third segment ..... 7
- 5(4) Pronotum with discal tubercles; body clothed with long flying hairs ..... 6
- Pronotum without discal tubercles; body lacking long flying hairs ..... *Ecteneolus*
- 6(5) Antennal tubercles, dorsal tubercles of pronotum and basal crested tubercles of elytra very prominent; eyes small, upper lobes distinctly separated by more than greatest diameter of antennal scape, lower lobe separated from base of mandibles by much more than their vertical length ..... *Alphomorphus*
- Antennal tubercles small, dorsal tubercles of pronotum and basal crested tubercles of elytra moderate; eyes large, upper lobes at most separated by approximate diameter of scape, lower lobe separated from base of mandibles by distinctly less than their vertical length ..... *Poliaenus*
- 7(4) Pronotum rounded or obtusely swollen at sides, without lateral tubercles ..... 8
- Pronotum armed with lateral tubercles ..... *Pogonocherus*
- 8(7) Body clothed with long flying hairs ..... *Pogonillus*
- Body without long flying hairs ..... *Ecyrus*

#### GENUS LYPSIMENA LECONTE

*Lypsimena* LeConte, 1852, Jour. Acad. Nat. Sci. Philadelphia, (2)2: 155; Thomson, 1864, Systema Cerambycidae, P. 397; Lacordaire, 1872, Genera des coléoptères, 9: 653; LeConte, 1873, Smithsonian Misc. Coll., 11(265): 342; LeConte and Horn, 1883, Smithsonian Misc. Coll., 507: 327; Leng and Hamilton, 1896, Trans. Amer. Entomol. Soc., 23: 139; Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 78; Knull, 1946, Ohio Biol. Surv. Bull., 39: 259.

*Alloeoscelis* Bates, 1885, Biologia Centrali-Americana, Coleoptera, 5: 358; Gahan, 1895, Trans. Entomol. Soc. London, 1895: 123.

*Estoloderces* Melzer, 1928, Arch. Inst. Biol. São Paulo, 1: 147.

This genus may be recognized by the elongate cylindrical form, unarmed pronotum, and by the absence of flying hairs on the body.

#### LYPSIMENA FUSCATA LECONTE

*Lypsimena fuscata* LeConte, 1852, Jour. Acad. Nat. Sci. Philadelphia, (2)2: 155; Chevrolat, 1862, Ann. Soc. Ent. France, (4)2: 253; Lacordaire, 1872, Genera des Coléoptères, 9: 653; Leng and Hamilton, 1896, Trans. Amer. Entomol. Soc., 23: 139; Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 79; Knull, 1946, Ohio Biol. Survey Bull., 39: 259, pl. 23, Fig. 91.

*Alloeoscelis leptis* Bates, 1885, Biologia Centrali-Americana, Coleoptera, 5: 358; Gahan, 1895, Trans. Ent. Soc. London, 1895: 123.

*Lypsimena californica* Horn, 1885, Trans. Amer. Entomol. Soc., 12: 194; Leng and Hamilton, 1896, Trans. Amer. Entomol. Soc., 23: 140; Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 79. New synonymy.

Male: form subparallel; integument brown to dark brown, clothed with irregular longitudinal whitish and brownish vittae. Head densely punctate; antennae slender, extending about three segments beyond elytral apices, scape brownish, flagellar segments rufescent, annulated. Pronotum wider than long, sides rounded, base constricted, disk convex, coarsely, irregularly punctate. Elytra coarsely, densely punctate; apices rounded. Abdomen with sternites coarsely punctate, more densely so at sides; last sternite subtruncate or feebly emarginate at apex. Length, 6–8 mm.

Female: antennae exceeding apex of elytra by approximately one segment; abdomen with last sternite rounded at apex. Length, 6–9 mm.

This is a widespread species, occurring from the United States to South America and the West Indies.

#### LYPSIMENA STRANDIELLA BREUNING

*Lypsimena Strandiella* Breuning, 1943, *Folia Zool. Hydrobid.*, 12(1): 58.

Male: Form moderate sized, slightly tapering posteriorly. Color dark reddish brown, pronotum infuscated at apex and sides, elytra infuscated along margins from base to beyond middle, antennal scape and apices of other segments dark, front and middle legs infuscated; pubescence moderately dense, short, appressed, gray and brownish. Head with vertex abruptly declivous from neck; antennae slender, extending about 2 segments beyond elytra, third segment straight, longer than first, fourth about as long as third, outer segments short. Pronotum broader than long, sides rounded; base deeply impressed, apex not impressed; disk prominently humped at middle, coarsely, contiguously punctate; punctures longitudinal; pubescence short, appressed, denser at sides, middle shining; prosternum short, intercoxal process rounded, expanded at apices, coxal cavities closed; mesosternal process broad, emarginate behind; metasternum coarsely, densely punctate, densely pubescent. Elytra with two large obtuse gibbosities at base near suture; punctures coarse, dense, becoming finer toward suture; pubescence thick, gray, brownish on gibbosities, apical one third with brown finely pubescent vittae on each side, the first semicircular, median, connecting to a transverse band; middle of elytra concave, apices somewhat declivous, narrowly rounded. Abdomen micropunctate; basal segment with large shallow punctures at sides; pubescence dense at sides; sparse on middle; last segment broadly subtruncate at apex. Length, 8 mm.

Type locality: PUEBLA, MEXICO

We have seen only the type of this species which is partially coated with some sticky substance. It is in the National Museum of Natural History mislabelled as, "*Lypsimena bicristata* Breuning."

The prominent basal gibbosities and pubescent pattern of the elytra should readily separate this species from *fuscata*.

#### GENUS PYGMAEOPSIS SCHAEFFER

*Pygmaeopsis* Schaeffer, 1908, *Bull. Brooklyn Inst. Arts Sci.*, 1: 347.

This genus may be recognized by the small size, feebly clavate femora and laterally tuberculate pronotum. One species is known.

## PYGMAEOPSIS VITICOLA SCHAEFFER

*Pygmaeopsis viticola* Schaeffer, 1908, Bull. Brooklyn Inst. Arts Sci., 1: 347.

Male: integument brown, variegated with darker brown or blackish spots on elytra. Head moderately densely punctate; antennae about as long as body, scape stout, segments three to ten annulate apically with darker brown or black, third segment slightly longer than scape, fourth segment about one-third longer than third, about twice as long as fifth, remaining segments subequal to fifth but decreasing slightly in length toward apex. Pronotum with sides feebly rounded, wider than long; disk densely and rather coarsely punctate, without dorsal tubercles; scutellum densely white-pubescent. Elytra about three times as long as basal width, coarsely, densely, irregularly punctate; apices rounded. Underside clothed with recumbent cinereous pubescence. Length, 4 mm.

This species described originally from Brownsville, Texas, has not been seen in Mexican material available to us. However, it undoubtedly extends southward, perhaps as far as Veracruz.

## GENUS CALLIPOGONIUS LINSLEY

*Callipogonius* Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 79.

This genus appears to be related to *Ecyrus* but differs in the elongate, ridge-like pronotal tubercles and the presence of long flying hairs on the body and legs. Two species are known, both occurring in Mexico.

## CALLIPOGONIUS HIRCINUS (BATES)

*Poliaenus hircinus* Bates, 1885, Biologia Centrali-Americana, Coleoptera, 5: 358.

*Callipogonius hircinus*, Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 80.

In addition to the type specimen from Jalapa in the British Museum (Natural History), we have examined a specimen from Cordoba, Veracruz, collected by G. H. Nelson on June 27, 1972.

## CALLIPOGONIUS CORNUTUS (LINSLEY)

*Ecyrus cornutus* Linsley, 1930, Pan-Pacific Entomol., 7: 86, figs 1, 2.

*Callipogonius cornutus*, Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 81.

This species differs from *C. hircinus* primarily by having the dorsal prothoracic ridges prolonged backward into a horn. The type series is from Brownsville, Texas but we have seen specimens from 6.6 miles east of Sontecomapan, Veracruz, 1500 ft. elev. (George E. Ball and D. R. Whitehead) and 1 mile southwest of La Resolana, Jalisco, 20 November, 1950 (Ray F. Smith).

## GENUS ECTENEOLUS BATES

*Ecteneolus* Bates, 1885, *Biologia Centrali-Americana*, Coleoptera, 5: 356; Linsley, 1935, *Ann. Entomol. Soc. Amer.*, 28: 87.

Body elongate, without flying hairs. Head subconcave between the antennae; front short, convex; eyes coarsely granulated; antennae shorter than the body (female), clothed on inner side with flying hairs, segments three to eleven gradually decreasing in length toward apex. Prothorax stout, cylindrical, armed with lateral tubercles. Elytral apices shortly, obtusely truncate. Anterior coxal cavities broadly angulated, open. Femora clavate; intermediate tibiae with an external sinus.

Type species: *Ecteneolus flohri* Bates (monobasic).

This genus has not been seen and the above characters are drawn from Bates' description and the remarks following the description. It resembles *Ecyrus* in the absence of long flying hairs on the body, but because of the lateral tubercles of the prothorax it is associated with *Poliaenus*.

## ECTENEOLUS FLOHRI BATES

*Ecteneolus flohri* Bates, 1885, *Biologia Centrali-Americana* Coleoptera, 5: 360; Linsley, 1935, *Ann. Entomol. Soc. Amer.*, 28: 88.

Described from "Mexico, near the city."

## GENUS ALPHOMORPHUS LINSLEY

*Alphomorphus* Linsley, 1935, *Ann. Entomol. Soc. Amer.*, 28: 100.

This genus is apparently related to *Poliaenus* but differs, among other features in the much smaller eyes and strongly developed antennal tubercles and more prominent tubercles of the dorsum of the pronotum and subbasal area of the elytra. A single species is known.

## ALPHOMORPHUS VANDYKEI (LINSLEY)

*Pogonocherus vandykei* Linsley, 1930, *Pan-Pacific Entomol.*, 7: 82.

*Alphomorphus vandykei*, Linsley, 1935, *Ann. Entomol. Soc. Amer.*, 28: 100.

*Poliaenus vandykei grandis* Linsley, 1933, *Bull. Brooklyn Entomol. Soc.*, 28: 185.

New synonymy.

*Alphomorphus vandykei grandis*, Linsley, 1935, *Ann. Entomol. Soc. Amer.*, 28, pl. 1, fig. 3.

*Poliaenus mexicanus* Breuning, 1940, *Folia Zoologica et Hydrobiologia*, 10: 185.

New synonymy.

This species was first described from a specimen from Uvalde, Texas, taken inside a motel. Later, the subspecies *grandis* was named and illustrated from Tejupilco, in the State of Mexico. The circumstances surrounding the capture of the original specimen, the fact that no ex-

amples have been subsequently taken in the United States, and that all material seen by us has been from central and southern Mexico, suggests that the type specimen was a vagrant, perhaps escaping from luggage carried by a traveler from Mexico or from imported plant or other material. We propose to remove it from the list of Cerambycidae occurring in America north of Mexico.

Considerable variation in size (8–12 mm) and coloration (tawny and pale to predominantly dark brown) is evident in the material before us. On this basis we have synonymized the subspecies *grandis* which was based primarily on these characters. Although we have not seen the type of *Poliaenus mexicanus* Breuning, recorded as from Tlatizapan, Mexico (= Tlaltzipan, Morelos?), the description fits the present species very well.

Data from Mexican specimens examined by us are as follows: Tejupilco, Mexico, 4000–6000 ft., July 1932, ♂ ♀ (H. E. Hinton); Cuernavaca, Morelos, October, 1946, on stem of *Opuntia*, ♂ (N. H. L. Krauss); Cuernavaca, 15 August 1967, ♀; Cuernavaca, 10 mi. E., 31 July 1963 ♂ (J. Doyen); Cuernavaca, 7 kilometers E., 5800 ft., 11 August 1962, 1 ♂, 3 ♀ (G. E. Ball); Iguala, Guerrero, 24 miles S., 18 July 1963, ♂ (F. D. Parker and L. A. Stange); Rio Mexcala, Guerrero, 6 mi. S. (Highway 95), 5 August 1965, ♂ ♀ (G. H. Nelson).

#### GENUS POLIAENUS BATES

*Poliaenus* Bates, 1880, *Biologia Centrali-Americana Coleoptera*, 5: 120, Linsley, 1935, *Ann. Entomol. Soc. Amer.*, 28: 81.

This genus resembles *Pogonocherus* but differs in the structure of the antennae and prothorax and shape of the front coxal cavities and elytral apices.

Four species are known to occur in Mexico.

#### KEY TO THE MEXICAN SPECIES OF POLIAENUS

- 1 Moderate sized species with dorsal surface wholly or largely obscured by dense mats of moderately long appressed, white, ochraceous or golden pubescence, often thinner laterally and apically; antennae with flying hairs predominately white, with black hairs intermixed on basal segments ..... 2
- Small species with dorsal surface mostly shining, appressed pubescence, where present, short, fine, not covering integument; antennae with flying hairs predominately black; pronotum with dorsal tubercles polished, lateral tubercles moderate, obtuse, scarcely recurved. 5.5 mm. Nayarit ..... *sparsus* n.sp.
- 2(1) Pronotum with lateral tubercles recurved; elytra with basal tubercles and crest prominent, black setae of dorsal surface long, coarse, conspicuous ..... 3

- Pronotum with lateral tubercles conical, obtuse, rarely slightly recurved; elytra with basal tubercles and crest small, not prominent, not crested, black setae of dorsal surface short, largely confined to apical one-half; pubescence predominately whitish and ochraceous, usually denser in a broad arc over basal two-fifths 7-9 mm. Baja California -----  
----- *concolor* (Schaeffer)
- 3(2) Body robust, elytra distinctly less than twice as long as basal width, integument brown; pronotum with lateral tubercles very prominent, apices acute or subacute, dorsal tubercles well developed, glabrous and shining or obscured by pubescence. 6-9 mm. Baja California, Sonora, Sinaloa ----- *volitans* (LeConte)
- Body slender, elytra twice as long as basal width, integument dark brown to blackish; pronotum with lateral tubercles moderate, only slightly recurved, apices obtuse, dorsal tubercles moderate, shining. 7.5 mm. Nuevo Leon ----- *nuevoleonis* n.sp.

### ***Poliaenus sparsus*, new species**

Female: Form small; integument dark brown, shining, irregularly clothed with short, fine, appressed, golden pubescence, which is not dense enough to obscure the surface, flying hairs long, erect and suberect, predominately white at sides and ventral surface and legs. Head about as broad as long; antennae exceeding elytral apices by slightly more than one segment, scape slender, attaining lateral pronotal tubercle. Pronotum, across lateral tubercles about one and one-third times as wide as long; disk, including dorsal tubercles shining, prostrate pubescence short, fine, sparse. Elytra about twice as long as basal width; prostrate pubescence somewhat denser over basal one-third behind humeri and basal tubercles and near suture behind middle but pattern, at most, indistinct; basal tubercle small, obscurely tufted with black, as are the postmedian costal tubercles; epipleurae very coarsely punctate over basal half of elytra; apices conjointly rounded. Ventral surface finely punctate, finely clothed with appressed pale pubescence which does not conceal the surface; abdominal sternites fringed with white, surface with a few suberect pale hairs; last sternite emarginate at apex. Length 5.5 mm.

*Holotype female* (California Academy of Sciences) from 24 MILES SOUTH OF TEPIC, NAYARIT, MEXICO, 7 July 1963 (F. D. Parker and L. A. Stange.)

This species differs at once from other known Mexican *Poliaenus* in the small size, shining, sparsely pubescent integument, and predominately black flying hairs of the antennae.

### **POLIAENUS CONCOLOR (SCHAEFFER)**

*Pogonocherus concolor* Schaeffer, 1909, Jour. New York Entomol. Soc., 17: 102; Fall, 1910, Entomol. News, 21: 9; Schaeffer, 1932, Bull. Brooklyn Entomol. Soc., 27: 154.

*Poliaenus concolor*, Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 83; Linsley, 1942, Proc. California Acad. Sci., (4)24: 81.

*Poliaenus obliquus* Linsley, 1942, Proc. California Acad. Sci., (4)24: 81. New synonymy.

This species was originally described from "California?" Later, this was corrected to "Lower California (S. Beyer)" and finally, Mr. Schaeffer informed one of us (Linsley) that it had undoubtedly come from Santa Rosa.

The type is a faded specimen with the erect hairs of the head and thorax largely denuded. Although we have not compared specimens with the type, there is little doubt that *P. obliquus* Linsley, described from five miles south of San Miguel and from Triunfo, Baja California Sur, is based upon fully maculated and pubescent examples of *P. concolor* Schaeffer.

We now have before us 33 specimens representing the following localities: Baja California Sur: 4 miles east of La Paz, 12 December 1958, ex dead *Bursera* (H. B. Leech); 4.5 mi. S.E. of La Paz, 3 August 1966 (J. A. Chemsak, P. D. Hurd, Jr., E. G. and J. M. Linsley); 7 mi. west of La Paz, 6 September 1967 (J. A. Chemsak, A. E. and M. M. Michelbacher), 25 mi. west of La Paz, 30 August and 4 September 1959 (K. W. Radford and F. G. Werner); 4 mi. north of Todos Santos, 2 September 1959 (Radford and Werner); 1 mi. southwest of Punta Palmilla, 13 September 1967 (Chemsak and Michelbacher); 2 mi. northwest of San Pedro, 19 September 1967 (Chemsak and Michelbacher); and 6 mi. north of San Jose del Cabo, 15 September 1967 (Chemsak and Michelbacher). Baja California Norte: Las Arrastas de Arriola, 3 April 1973 (J. Doyen, J. Powell and S. L. Szerlip).

#### POLIAENUS VOLITANS (LECONTE)

*Lophopoeum volitans* LeConte, 1873, Smithsonian Misc. Coll., (11)264: 232; Horn, 1894, Proc. Calif. Acad. Sci., 2(4): 340.

*Pogonocherus volitans*, Leng and Hamilton, 1896, Trans. Amer. Entomol. Soc., 23: 136; Schaeffer, 1909, Jour. New York Entomol. Soc., 17: 103; Fall, 1910, Entomol. News, 21: 7; Linsley, 1930, Pan-Pacific Entomol., 7: 85.

*Poliaenus volitans*, Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 86; Linsley, 1942, Proc. Calif. Acad. Sci., (4)24: 81.

*Poliaenus hirsutus* Bates, 1880, Biologia Centrali-Americana, Coleoptera, 5: 120; Chemsak and Linsley, 1970, Jour. Kansas Entomol. Soc., 43: 416 (lectotype designation).

*Poliaenus incertus* Breuning, 1943, Folia Zoologica et Hydrobiologica, 12: 58. New synonymy.

In this species the basic pubescent pattern of the elytra consists of a broad ante-median saddle mark of dense appressed white pubescence often tinged with golden, which is arcuate behind the humeri and basal tubercles and narrows posteriorly toward the elytral suture where it continues more or less parallel-sided to apical one fourth. The most characteristic feature is the prominent, recurved, acute structure of the lateral tubercles of the prothorax. As in other species of the genus, the last abdominal sternite is entire in the male, emarginate in the female.

We have examined the type of *volitans* from Cape San Lucas, the



type of *hirsutus* from Capetillo, Guatemala and the type of *incertus* from California Meridionalis. The last is a badly rubbed specimen with broken appendages but with the body structures identical with *P. volitans*.

Sixty-five Mexican specimens are before us from the following localities: Baja California Sur: 7 mi. west of La Paz, 4 August 1968 (J. A. Chemsak, P. D. Hurd, Jr., E. G. and J. M. Linsley); Santiago, 8 July 1938 (A. E. Michelbacher and E. S. Ross); 6 mi. southwest of Santiago, 31 August 1969 (K. W. Radford and F. G. Werner); 5 mi. west of San Bartolo, 13 July 1938 (Michelbacher and Ross); 6 mi. north of San Jose del Cabo, various dates in September, 1967 (J. A. Chemsak and A. E. and M. M. Michelbacher); and 10 mi. southwest of San Jose del Cabo, 1 September 1959 (Radford and Werner). Sonora: Desemboque, various dates in August and September, 1953 (B. Malkin); Louis, 26 September 1953 (B. Malkin); Puerto Libertad, 2 August 1950 (J. P. Figg Hoblyn). Sinaloa: 13 mi. north of Los Mochis, 7 August 1964 (J. A. Chemsak and J. Powell).

The Sonoran population has a somewhat different facies from that in Baja California and there is a tendency for the apices of the lateral pronotal tubercles to be more strongly produced and the dorsal tubercles glabrous.

### ***Poliaenus nuevoleonis*, new species**

Male: Body slender, elytra twice as long as basal width, integument dark brown to blackish, clothed with long flying hairs, mostly black on front of head, basal segments of antennae, and dorsal surface of pronotum and elytra, pubescence fine, appressed, golden above, white or vaguely ochraceous at sides and on ventral surface; elytral humeri prominent, basal tubercle moderate, crested with black, oblique impression from inside humerus to elytral suture deep, broadening rapidly to include sutural area from basal tubercle to mid-elytra, densely clothed with fine appressed golden pubescence which extends posteriorly along the suture to apical one-third. Head about as broad as long; antennae brown, exceeding elytral apices by about three segments, scape moderately slender, attaining lateral prothoracic tubercle, third segment longest, segments four to ten densely clothed with appressed white pubescence except at apices. Pronotum with width across lateral tubercles about one and one-third times length; lateral tubercles moderate, only slightly recurved, apices obtuse, dorsal tubercles moderate, shining. Elytra coarsely punctate especially basally and laterally, but punctures mostly obscured by pubescence; costae not well defined, obscured by pubescence, with a few polished tubercles near median area and a dense patch of brown hairs surrounded by golden pubescence at apical one-third; apices conjointly rounded. Abdomen with sternites fringed with white hairs, last sternite with apex entire. Length 7.5 mm.

*Holotype male* (Canadian National Collection) from CHIPINQUE MESA, 5400 ft., near Monterrey, NUEVO LEON, MEXICO, 23 July 1963 (H. Howden).

This is the first species of *Poliaenus* known from the eastern portion of northern Mexico. It appears to be related to *P. volitans*, but differs

in the narrower body form, less strongly developed lateral prothoracic tubercles and darker color.

#### GENUS POGONOCHERUS ZETTERSTEDT

*Pogonocherus* Zetterstedt, 1828, Fauna Ins. Lapponica, p. 364; LeConte, 1852, Jour. Acad. Nat. Sci. Philadelphia, (2) 2: 159; Lacordaire, 1872, Genera des coléoptères, 9: 653; Horn, 1878, Trans. Amer. Entomol. Soc., 7: 42; Leng and Hamilton, 1896, Trans. Amer. Entomol. Soc., 23: 135; Schaeffer, 1909, Jour. New York Entomol. Soc., 17: 102; Fall, 1910, Entomol. News, 21: 5; Casey, 1913, Memoirs on the Coleoptera, 4: 345; Linsley, 1930, Pan-Pacific Entomol., 7: 79; Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 95.

*Pityphilus* Mulsant, 1863, Coléoptères des France, Longicornes, p. 302; Lacordaire, 1872, Genera des coléoptères, 9: 635, fn. 2.

The proportions of the first, third and fourth antennal segments, shape of the anterior coxal cavities, and the form of the elytra will distinguish this genus from the others.

A single species extends into Mexico.

#### POGONOCHERUS (EUPOGONOCHERUS) ARIZONICUS SCHAEFFER

*Pogonocherus arizonicus* Schaeffer, 1908, Bull. Brooklyn Inst. Arts. Sci., 1: 346; Schaeffer, 1909, Jour. New York Entomol. Soc., 17: 102; Fall, 1910, Entomol. News, 21: 8; Casey, 1913, Memoirs on the Coleoptera, 4: 346; Linsley, 1930, Pan-Pacific Entomol., 7: 80.

*Pogonocherus (Eupogonocherus) arizonicus*, Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 98.

*Pogonocherus (Eupogonocherus) medianus* Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 98; Linsley, Knull and Statham, 1961, Amer. Mus. Novitates, 2050: 31. New synonymy.

One example from P. Buenos Aires, 37 miles west of El Salto, Durango, Mexico, 1 July, 1964, ex *Pinus* (H. F. Howden). This is the first record for the genus from Mexico.

Unfortunately, when Schaeffer described this species he gave the length as 13 mm. Actually, the size range as presently known is from 6–8 mm. This discrepancy in addition to variation in the number of subsutural tufts of erect black hairs on the elytra and the arrangement of the abdominal pubescence resulted in the above synonymy.

#### GENUS POGONILLUS BATES

*Pogonillus* Bates, 1885, Biologia Centrali-Americana, Coleoptera, 5: 360.

This species may be recognized by the lack of dorsal and lateral tubercles on the pronotum and by the long flying hairs of the body.

Type species: *Pogonillus subfasciatus* Bates, by present designation.

## POGONILLUS INERMIS BATES

*Pogonillus intermis* Bates, 1885, *Biologia Centrali-Americana*, Coleoptera, 5: 360.

Male: Body small, subparallel; integument brown to dark brown; pubescence variegated with brownish, grayish and black, flying hairs mostly brownish. Head finely punctate, pubescence of face mostly appressed; antennae barely exceeding elytral apices, lightly annulated with brown, scape with long erect hairs on all surfaces, remaining segments densely clothed with long hairs internally, sparsely so externally, setae most conspicuous near apices of segments. Pronotum about as long as broad, finely punctate with scattered coarser punctures superimposed, pubescence fine, dense, appressed with scattered long erect hairs. Elytra with punctation similar to that of pronotum, prostrate pubescence mostly whitish and patchy, erect hairs mostly dark brown; apices rounded. Abdomen with last segment truncate at apex. Length 4.5 mm.

Female: Antennae distinctly shorter than the body; abdomen with last segment rounded at apex. Length 4-4.5 mm.

In addition to the type, which is a male from Cordoba and the associated female from Jalapa in the British Museum (Natural History) we have examined a male from 19 miles NE of Cordoba, Veracruz, 1 July 1958, 1000 ft. elev. (University of Kansas Mexican Expedition) and a female from Temescal, Oaxaca, 5 July 1965 (G. H. Nelson and family).

## GENUS ECYRUS LECONTE

*Ecyrus* LeConte, 1852, *Jour Acad. Nat. Sci. Philadelphia*, (2)2: 161; Leng and Hamilton, 1896, *Trans. Amer. Entomol. Soc.*, 23: 137; Linsley, 1930, *Pan-Pacific Entomol.*, 7: 85; Linsley, 1935, *Ann. Entomol. Soc. Amer.*, 28: 88.

The absence of flying hairs on the body, unarmed sides of the pronotum, short, clavate antennal scape, and the long incurved fourth segment of the antennae will distinguish this genus from others in the tribe.

Six species are known from Mexico.

## KEY TO THE MEXICAN SPECIES OF ECYRUS

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| 1 | Elytra with three or more rows of tufts of short brownish or blackish hairs; pronotum without glabrous discal calluses; scutellum brown pubescent .....  | 2 |
| - | Elytra with a single row of three fascicles of long, erect brownish or blackish hairs; pronotum with a small glabrous callus on each side just anterior to middle of disk, and with a dense patch of chalky-white pubescence on each side of middle over basal half or two-thirds; elytra with similar dense, chalky-white pubescence at base and over most of apical one-half; scutellum white pubescent. 6-11 mm. Texas to Vera Cruz and Sinaloa ..... |   |
- penicillatus* Bates

- 2(1) Pronotum without a glabrous median longitudinal line, discal tubercles conical, pubescent ..... 3  
 Pronotum with a narrow glabrous median longitudinal line, discal tubercles narrowly elongate, with a glabrous black line which sometimes extends to anterior and basal margins. 6–10 mm. Oaxaca and Veracruz ..... *lineicollis* n.sp.
- 3(2) Elytra with basal tubercles forming a short, transverse black line ..... 4  
 Elytra with basal tubercles forming an obliquely arcuate black line along the edge of post-humeral depression, not reaching suture nor humeri, sometimes obscured by overlying black and brown pubescence over basal one-third or one-fourth, apical two-thirds of elytra predominantly white, grading into light brown over apices. 8–11 mm. Yucatan and Quintana Roo and Guatemala ..... *arcuatus* Gahan
- 4(3) Face clothed with brown pubescence; vertex with a pair of prominent longitudinal ridges above eyes; antennae with fourth segment about as long as second and third combined ..... 5  
 - Face clothed with dense white pubescence between the eyes and over the antennal tubercles; vertex with a narrow polished longitudinal ridge on each side of middle above eyes; antennae moderately densely fringed internally with long-fine curled white hairs, intermixed with shorter, stiff, black ones, especially near apices of third and fourth segments, fourth segment distinctly longer than second and third combined. 10 mm. Cuernavaca ..... *albifrons* n.sp.
- 5(4) Antennae ciliate internally but cilia mostly straight; elytra moderately coarsely punctate; antennal scape only moderately stout. 6–8 mm. Baja California, Sonora, Sinaloa ..... *pacificus* Linsley  
 - Antennae densely ciliate internally with fine white hairs, longer and curved apically in the male; elytra very coarsely punctate although punctures often obscured pubescence; antennal scape stout. 8–10 mm. Michoacan and Guerrero ..... *ciliatus* n.sp.

#### ECYRUS PENICILLATUS BATES

*Ecyrus penicillatus* Bates, 1880, *Biologia Centrali-Americana*, Coleoptera, 5: 137; Linsley, 1930, *Pan-Pacific Entomol.*, 7: 89; Linsley, 1935, *Ann. Entomol. Soc. Amer.*, 28: 91, pl. 1, fig. 7; Chemsak and Linsley, 1970, *Jour. Kansas Entomol. Soc.*, 43: 410 (lectotype designation).

*Ecyrus fasciatus* Hamilton, 1896, *Trans. Amer. Entomol. Soc.*, 23: 137; Linsley, 1931, *Pan-Pacific Entomol.*, 7: 105.

This species may be readily recognized by the characters enumerated in the key. In addition to the type specimen of *E. penicillatus* from Mirador, Veracruz, Mexico (British Museum—Natural History) and that of *E. fasciatus* from Brownsville, Texas, we have seen examples from the following localities in Mexico: East edge of San Jose de las Pusias Mtns., 30 miles NNE of Aldama, Tamaulipas (Martin Robins); 8 miles E. Padilla, Rancho Sta. Ana, 12 December 1941 (Cantrall, Friauf.); 1 mile W Anton Lizardo, Veracruz, 23 June 1961 (Univ. Kansas Mexican Expedition); Puente Nacional, Veracruz, 17 August 1960 (H. F. Howden); Mazatlan, Sinaloa, 5 August 1968 (M. Bentzien, J. Bigelow, S.

Williams, M. Cazier) and 5 miles north of Mazatlan on various dates in July and August (J. A. Chemsak, E. Giesbert, H. F. Howden, G. H. Nelson, J. Powell).

In Texas this species has been collected in late May, June and early July from dead branches of willow (*Salix*). Most of the examples from Mazatlan were attracted to "black light" at night.

### ***Ecyrus lineicollis*, new species**

Male: Form moderately robust; integument dark to reddish brown; pubescence variegated, brownish, golden-brown and white, black over subbasal elytral tubercles. Head finely punctate, finely, densely clothed with an intermixture of brownish and whitish prostrate pubescence; white pubescence denser between eyes and over antennal tubercles, vertex with a glabrous longitudinal ridge on each side of midline; antennae exceeding elytral apices by four segments, scape moderately robust, finely densely punctate, clothed with long, prostrate white and golden appressed pubescence, shorter than third segment, fourth segment much longer than third, slightly less than twice as long as scape, segments three to ten clothed beneath with long, pale cilia which become more erect on outer segments, annulated with dark brown at apices, third segment dark brown, remaining segments light brown. Pronotum only slightly wider than long, obtusely swollen but not tuberculate at sides, pubescence predominantly brown with some intermixture of white, disk with a median, glabrous, shining black line, ante-median lateral discal tubercles glabrous, longitudinal, shining, black; pro- and mesosterna coarsely punctate, largely white pubescent. Legs reddish brown, white pubescent. Elytra variegated with brownish and whitish pubescence, brown predominantly basally and apically, white medially, surface rather coarsely punctate and tuberculate; basal tubercles in the form of an arcuate ridge along edge of ante-median impression; apices shallowly emarginate. Abdomen shining, finely punctate, clothed with prostrate white pubescence with some erect hairs at apex; apex entire with a fringe of short golden hairs. Length, 8 mm.

Female: Antennae barely exceeding elytral apices; abdomen with apex of last segment shallowly emarginate. Length, 7 mm.

*Holotype male* and *allotype* (California Academy of Sciences) from 5 MILES WEST OF TEHUANTEPEC, OAXACA, MEXICO, 1 July 1972 (G. H. Nelson). Paratypes: one with same data as holotype and allotype, one from 7 miles west of Tehuantepec, 2 July 1972 (G. H. Nelson), four from 3 miles west of Tehuantepec, 19 July 1965, on *Acacia pennatula* (G. H. Nelson), one from Tehuantepec, 23 July 1964 (Paul J. Spangler), two examples from 23 miles south of Matias Romero, Oaxaca, 5 April and 22 April 1962 (F. D. Parker and L. A. Stange), one from 21 miles south of Matias Romero, 12 July 1962 (J. M. Campbell) and one from 7 miles northeast of Juchitan, Oaxaca, 18 July 1952 (E. E. Gilbert, C. D. MacNeill). Additional material not designated paratypic includes one specimen from Temescal, Oaxaca, 16-23 August 1965 (A. B. Lau) and two from 6 miles south of Tinaja, Veracruz, on Highway 145, 26 June 1972 (G. H. Nelson).

This species differs from the other *Ecyrus* presently known by the narrow polished longitudinal midline of the pronotum and the narrowly elongate discal tubercles which are overlaid with a black line which sometimes extends to the basal and apical pronotal margins.

## ECYRUS ARCUATUS GAHAN

*Ecyrus arcuatus* Gahan, 1892, Trans. Entomol. Soc. London, p. 259, pl. 12, fig. 2, Linsley, 1930, Pan-Pacific Entomol., 7: 90, Linsley, 1935, Ann. Entomol. Soc. Amer., 28: 91, pl. 1, fig. 9.

This species was described originally from Temax, North Yucatan (Gaumer). In addition to the type which was examined in the British Museum (Natural History) we have seen a specimen labelled "Yucatan" "G. F. Gaumer" in the collection of the University of Kansas, an example from Piste, Yucatan, 1 September 1967, and 5 more from X-Can, Quintana Roo, 12-14 June 1967 (E. C. Welling) and 1 from Peten Tikal, 31 March 1956 (I. J. Cantrall).

Although the arcuate subbasal row of black or brown tufted tubercles on the elytra are always evident, in one of the X-Can specimens they are overlaid with a broad dark brown transverse band covering the basal one-third or more. Also, all of the X-Can examples have most of the apical half of the elytra densely white pubescent, shading into light brown over the elytral apices.

***Ecyrus albifrons*, new species**

Male: Form moderately robust; integument dark brown, pubescence variegated with brown and white above, face between eyes, antennal tubercles, median transverse band on elytra, most of venter and legs predominantly white pubescent, basal and apical thirds of elytra largely pale brown pubescent, subbasal tubercles black. Head finely punctate, a black tubercle on each side of mid-line just above the eyes connected to a similar pair of tubercles on outer margins of pronotum by a narrow polished ridge; antennae exceeding elytral apices by about four segments, scape moderately robust, a little shorter than third segment, fourth segment distinctly longer than second and third segments combined, less than twice as long as scape, third segment brown pubescent, annulated with white at base, segments four to ten white pubescent, annulate with brown at their apices, segments three to ten ciliate beneath, the cilia predominantly brown on third segments and apices of remaining segments which also bear long recurved whitish hairs. Pronotum slightly wider than long, sides swollen at middle, pubescence predominantly brown, intermixed with lighter brown and some white; disk thinly pubescent and shining at middle but without a glabrous median line; pro-, meso- and metasterna, coxae and legs largely white pubescent but with scattered irregular glabrous or semi-glabrous areas. Elytra with a pair of subbasal black tubercles arranged more or less transversely, not curving forward in an arc along edge of antemedian depression; apices truncate. Abdomen shining, finely punctate, basal segments and remaining segments at sides clothed with prostrate white pubescence; apex entire, fringed. Length 10 mm.

*Holotype male* (California Academy of Sciences) from CUERNEVACA, MEXICO (A. Fenyés).

This species is distinctive in the very narrow polished longitudinal ridges of the vertex above the eyes. It further differs from *E. arcuatus* in the number and arrangement of the subbasal elytral tubercles and

from *E. lineicollis* by the absence of longitudinal glabrous lines on the pronotum.

#### ECYRUS PACIFICUS LINSLEY

*Ecyrus pacificus* Linsley, 1942, Proc. Calif. Acad. Sci., (4)24: 80.

This species, described originally from San Domingo, Baja California, 19 July 1938 with a paratype from 21 miles north of Comondu, 2 July 1938, both examples having been captured at light by A. E. Michelbacher and E. S. Ross, has recently been taken in numbers on the west coast mainland of Mexico. We have the material before us as follows: Alamos, Sonora, 15-20 July 1958 and 15-16 July 1973 (R. L. Westcott); 7 miles W of Alamos, 8 August 1964 (J. A. Chemsak, J. Powell); and 5 miles north of Mazatlan, Sinaloa, 8 August 1964, 10 August 1965 (G. H. Nelson), 1 August 1965 (J. A. and M. A. Chemsak, E. G. and J. M. Linsley), 26-29 July 1973 (J. A. Chemsak, E. G. and J. M. Linsley, A. E. and M. M. Michelbacher).

The median band of the elytra is at times more or less triangular and does not reach the suture and sometimes is in the form of a broad band extending across both elytra.

#### *Ecyrus ciliatus*, new species

Male: Form robust; integument dark brown, shining, finely punctate with coarser punctures superimposed, especially on elytra; pubescence variegated with brown and white above except for an oblique median band on elytra; body beneath and legs clothed with prostrate white pubescence broken by irregular glabrous areas, especially on legs. Head finely punctate, facial pubescence predominantly brown; vertex with a prominent longitudinal ridge on each side of midline above the eyes; antennae extending about four segments beyond elytral apices, pubescence predominantly white mixed with some brown, apices annulated with brown, more extensively so on outer segments fourth segment about as long as second and third together, segments three to eleven densely ciliate within, cilia of segments four to eleven long, recurved, mostly pale. Pronotum slightly wider than long; sides obtusely swollen at middle; disk polished, surface shining beneath the slightly sparser pubescence but without a median longitudinal glabrous line, anterior margin bituberculate, the tubercles clothed with short dense black hairs; pro-, meso- and metasterna white pubescent, finely punctate, metasternum with scattered, largely obscured, large punctures superimposed. Elytra coarsely punctate, with a pair of black subbasal tubercles placed transversely, not curving forward in an arc along ante-median depression; apices feebly truncate. Abdomen shining, thinly clothed with long white prostrate pubescence; apex entire, fringed. Length, 9.5 mm.

Female: Antennae barely exceeding elytral apices, moderately densely ciliate internally, cilia mostly straight, not long and recurved; abdomen with apical segment slightly emarginate. Length, 9 mm.

*Holotype male* and *allotype* (California Academy of Sciences) from 11 MILES EAST OF APATZINGAN, MICHOACAN, MEXICO 20 August 1954 (E. G. Linsley, J. W. MacSwain & R. F. Smith) and six paratypes with the same data. Additional

paratypes include: one dated, 19 August 1954, 5 miles east of Apatzingan (Linsley, MacSwain and Smith); one from Apatzingan, alt. 1200 ft., 21 August 1941, from *Acacia* (Harry Hoogstraal); one from 31 miles S. Nueva Italia, Michoacan, 26 September 1959 (Cantrall and Cohn); and one from 24 miles south of Iguala, Guerrero, Mexico, 18 July 1963 (F. D. Parker and L. A. Stange).

This species is very close to *E. pacificus* Linsley, but the average size is larger (8–10 mm as against 6–8 mm) and the antennae are more densely ciliate internally, sex for sex. Since the two as now known are allopatric it is possible that with longer series from a greater variety of localities they may prove to be only subspecifically different. As in *E. pacificus*, the oblique pale area of the elytra may or may not extend to the suture.

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### SCIENTIFIC NOTE

**Observations on the Egg Laying and Sleeping Habits of *Euparagia scutellaris* Cresson (Hymenoptera: Vespoidea).**—All known masarid wasps provision their nests with pollen except *Euparagia scutellaris* Cresson which is predatory on weevil larvae. Clement and Grissell (1968, Pan-Pac. Entomol., 44: 34–37) reported that *E. scutellaris* provisions the cell before depositing its egg. This represents the only known exception in the superfamily Vespoidea since all others deposit the egg before provisioning.

While at the University of California's Sagehen Creek Field Station, Nevada County, California in July, 1974, I had the opportunity to excavate several nests of *E. scutellaris*. The excavation technique used, although not original, gave excellent results. A piece of grass or twig was inserted into the nest entrance as a marker and a 25 cm deep trench was then dug around the nest to encircle an area of about 25 square cm. When the soil was rocky, water was added to the trench to aid in the excavation. Then, each nest was carefully removed and dissected with fine tools under proper lighting conditions.

One nest contained three cells with 36, 34, and 4 weevil larvae respectively. Each cell contained a wasp egg or larva located at its base. Obviously, the cell with 4 weevil larvae was still being provisioned. The position of the egg and the fact that an egg was found in a partially provisioned cell strongly indicate that eggs are deposited prior to provisioning. Thus, *E. scutellaris* conforms to the egg deposition behavior of other Vespoidea.

It is well-known that the males of many wasps and bees sleep in aggregations while perched upon twigs, grass, and shrubs. In July 1974, several groups of *E. scutellaris* males were found on grass stalks at the Sagehen Creek Field Station. I believe this is the first report of such a phenomenon in masarids.—WAYNE S. MOORE, *Department of Entomology, University of California, Davis, California 95616.*